UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,295	09/12/2003	Peter Poechmueller	INTECH 3.0-102 03 P 51716	7427

48154 7590 10/31/2005		EXAMINER
SLATER & MATSIL LLP		ROSSOSHEK, YELENA
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	ART UNIT	PAPER NUMBER
SUITE 1000	2825	
DALLAS, TX 75252		

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/661,295	POECHMUELLER, PETER
	Examiner	Art Unit	
	Helen Rossoshek	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2003*.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *5/2/05*.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the Application 10/661,295 filed 09/12/2003.

2. Claim 1-30 are pending in the Application.

Claim Objections

3.   Claims 2-10, 12-19 and 22-30 are objected to because of the following informalities:

The steps b) and c) of the claims 10, 20 and claim 30 are formulated unclear, because they have too many conditions confusing to understand. Examiner's suggestion is, perhaps, to break down these steps into substeps, each having one condition.

Claims 2-9, 12-19 and 22-29 have antecedent basis issue. Examiner proposes few ways of formulating dependent claims:

-    The method of claim 1 wherein . . .

-    The method as described in claim 1 wherein . . .

These examples are made for claim 2, the same format is applicable to the rest of the claims 3-9, 12-20 and 22-29.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Gopalakrishnan et al. (US Patent 6,874,133).

With respect to claims 1, 11 and 21 Gopalakrishnan et al. teaches an automatic machine-implemented method, a machine-readable medium recording a set of instructions for performing a method of de-compacting a layout of a portion of an integrated circuit, a system operable to decompact a layout within providing an automated circuit design layout compaction method (col. 1, II.7-9, II.59-63) with ability of the **increasing** and/or decreasing the spacing or distance between member devices (col. 6, I.67; col. 7, II.1-2), comprising: automatically (col. 6, II.62-63) enlarging a spacing between neighboring features of a path of a layout provided that the length of the path does not then exceed a predetermined dimensional constraint and provided that connectivity is maintained between the neighboring features and any features of the layout to which the neighboring features are connected within the compaction method by increasing the distance between two member devices (col. 14, II.13-14, II.17-20), wherein the process of increasing the distance between two member devices is done without violation of the spacing constraints (col. 3, II.48-52) with consideration the neighboring member devices affected by processing of increasing the distance between two member devices (col. 14, II.66-67; col. 15, II.1-7); and repeating the enlarging for at least one other spacing of the layout within processing increasing the distance between

two member devices as show on the Figs. 8(a) and 8(b), wherein increasing the distance is performed until the spacing constraints are met (col. 14, ll.50-53).

With respect to claims 10, 20 and 30 Gopalakrishnan et al. teaches an automatic machine-implemented method, a machine-readable medium recording a set of instructions for performing a method of de-compacting a layout of a portion of an integrated circuit, a system operable to decompact a layout within providing an automated circuit design layout compaction method (col. 1, ll.7-9, ll.59-63) with ability of the **increasing** and/or decreasing the spacing or distance between member devices (col. 6, l.67; col. 7, ll.1-2), comprising: a) providing a predetermined dimensional constraint for the layout in a first direction of the layout by setting the spacing constraints associated with each member device of the layout forming an integrated circuit (abstract; col. 1, ll.7-9); b) automatically enlarging a spacing between first and second features of a path of the layout by a predetermined amount, provided that the length of the path does not then exceed the predetermined dimensional constraint within the compaction method by increasing the distance between two member devices (col. 14, ll.13-14, ll.17-20), wherein the process of increasing the distance between two member devices is done without violation of the spacing constraints (col. 3, ll.48-52) and provided that connectivity is maintained between the first and second features and any features of the layout to which the first and second features are connected, when the spacing is smaller by the predetermined amount than the larger of a first neighbor spacing between the first feature and a third feature of the path neighboring the first feature, and a second neighbor spacing between the second feature and a fourth

feature of the path neighboring the second feature when the process of increasing the distance between two member devices is performed with consideration the neighboring member devices affected by processing of increasing the distance between two member devices (col. 14, ll.66-67; col. 15, ll.1-7); and c) repeating the step b) in order from a smallest the spacing enlargeable by the step b) until all spacings enlargeable by the step b) are enlarged as many times as enlargeable within processing increasing the distance between two member devices as show on the Figs. 8(a) and 8(b), wherein increasing the distance is performed until the spacing constraints are met (col. 14, ll.50-53).

With respect to claims 2-9 Gopalakrishnan et al. teaches that:

Claims 2, 12 and 22: enlarging is repeated until all enlargeable spacings of the layout are enlarged within processing increasing the distance between two member devices at an appropriate time until spacing constraints are met as shown on the Figs. 8(a) and 8(b) (col. 14, ll.50-53; ll.56-61);

Claims 3, 13 and 23: spacings are enlarged in order from a smallest spacing of the layout within the compaction method including compacting and uncompacting processes are embodied in a computer software program (col. 7, ll.15-16) and might be processed in any order or simultaneously (col. 7, ll.37-41) generally depending on the computer program code when the violation of the spacing constraints is found, i.e. when as a result of compaction the distance between two member devices does not meet spacing constraint (smaller then permitted) (col. 3, ll.44-47);

Claims 4, 14 and 24: predetermined dimensional constraint is a critical path length (C) of the layout in a first direction of the layout (col. 15, ll.4-7, ll.16-19);

Claims 5, 15 and 25: predetermined dimensional constraint represents a dimension of an area available for the layout in a first direction as shown on the Figs. 8(a) and 8(b) (col. 14, ll.60-65);

Claims 6, 16 and 26: predetermined dimensional constraint limits the length of the path in a first direction of the layout, wherein the neighboring features include a first feature and a second feature neighboring the first feature of the spacing, wherein the path includes a first neighbor spacing between the first feature and a third feature neighboring the first feature, and when the path includes a fourth feature neighboring the second feature, the path further includes a second neighbor spacing between the second feature and the fourth feature, wherein the spacing is enlarged only when the spacing is smaller than the larger of the first neighbor spacing and the second neighbor spacing by a predetermined amount when the path includes the fourth feature, and when the path does not include the fourth feature, the spacing is enlarged only when the spacing is smaller than the first neighbor spacing by the predetermined amount within the process of increasing the distance between two member devices is done without violation of the spacing constraints (col. 3, ll.48-52) with consideration the neighboring member devices affected by processing of increasing the distance between two member devices (col. 14, ll.66-67; col. 15, ll.1-7);

Claims 7, 17 and 27: the spacing is enlarged by the predetermined amount within increasing the distance between member devices in the limited area inside conformal outline as shown on the Figs. 2(a) and 2(b) (col. 15, ll.61-63);

Claims 8, 18 and 28: the spacing is enlarged, the larger of the first neighbor spacing and the second neighbor spacing is reduced by the predetermined amount when the path includes the fourth feature, and when the path does not include the fourth feature, the first neighbor spacing is reduced by the predetermined amount within the combination of increasing and decreasing the distance between member devices (col. 15, ll.61-63) with consideration the neighboring member devices affected by processing of increasing the distance between two member devices (col. 14, ll.66-67; col. 15, ll.1-7);

Claims 9, 19 and 29: each the spacing is enlarged as many times as enlargeable within processing increasing the distance between two member devices at an appropriate time until spacing constraints are met as shown on the Figs. 8(a) and 8(b) (col. 14, ll.50-53; ll.56-61; col. 7, ll.41-43).
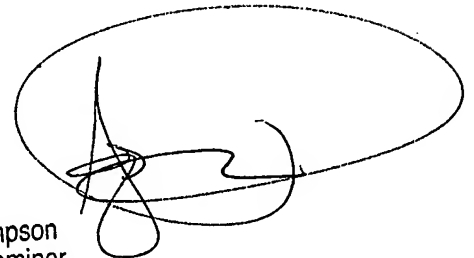
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen Rossoshek whose telephone number is 571-272-1905. The examiner can normally be reached on 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner
Helen Rossoshek
AU 2825

A. M. Thompson
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